

REMARKS

The indicated allowability of claims 21, 23, 26-29, 32 and 35-38 is gratefully acknowledged.

The Examiner rejected the remaining claims 20, 22, 24, 25, 30, 31, 33 & 34 as being obvious over the combination of U.S. Patent No. 6,611,369 to Matsushita and U.S. Patent Publication No. 2004/0130777 to Islam. It is noted that the filing date of Islam (July 25, 2003) is after the priority date (April 24, 2003) of the present application.

Regarding Matsushita, it is submitted that the depolarization elements of this reference do *not* perform the de-correlating longitudinal modes function of the claimed subject matter. Matsushita does not disclose that the depolarization elements de-correlate the longitudinal modes of that pump laser.

The aim of the depolarization elements in Matsushita is to provide a stable Raman gain. This is related to the fact that Raman gain is, in general, polarization dependent and, in particular, is maximum when the signal and the pump have parallel polarization, and minimum when the signal and the pump have orthogonal polarization. By depolarizing the pump, the signal gain becomes polarization independent.

The present application addresses a different problem, which is noise enhancement due to resonant parametric gain in G6555 type fibers. Typically, the pump laser is already depolarized. However, this is insufficient to overcome the problem of noise enhancement.

The claimed subject matter overcomes this problem by de-correlating the longitudinal modes of the pump laser, for example, by adding some chromatic dispersion. This destroys the phase matching relations among the longitudinal modes which, in turn, suppresses the resonant parametric gain.

Such an arrangement is not disclosed in, nor suggested by, Matsushita. Matsushita is only concerned with depolarization of the pump laser.

As noted by the Examiner, Matsushita also fails to teach that the transmission fiber has a zero dispersion wavelength line midway between the transmission band and the pump band.

It is therefore submitted that claim 20 is not obvious over Matsushita.

Even if the Examiner cited a further document similar to Islam, such a combination would still not show the de-correlating longitudinal modes feature of claim 20, since all the claims in the present application contain this feature. It is therefore submitted that the claims of the present application are patentable over Matsushita.

Allowance of all claims is respectfully requested.

Petition is hereby made for a one-month extension of the period to respond to the outstanding Official Action to June 11, 2009. The Commissioner is authorized to charge \$130.00, as the Petition fee, any additional charges, or any overpayment, in connection with the filing of this response, or any such deficiency, or credit any such overpayment, to Deposit Account No. 11-1145.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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